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M. LOUIS ON CONSUMPTION.

[A review of the second edition of M. Louis's Researches on Phthisis is contained in the October No. of the British and Foreign Medical Review. Some extracts from it are here given.]

Duration of Phthisis.—Too much stress can scarcely be laid upon the importance of acquiring an accurate notion of the mean duration of phthisis, and yet no task of greater difficulty, probably, can be assigned the physician. He who has practically, and, at the same time, conscientiously endeavored to ascertain the period of origin of the disease in a considerable number of cases, will fully bear us out, we doubt not, in this view of the difficulty of the attempt. We are indeed persuaded from our own experience that, especially among patients of the class frequenting hospitals, it is not seldom a matter of impossibility to satisfy one's self as to the accuracy of the averments made respecting the outset of disease. And it is for this reason that we are gratified to find M. Louis speaking of his results as drawn from cases in which the duration of the disease was ascertained "with all the precision possible," and not dogmatically presenting them as positively and absolutely accurate. It is besides obvious that the *real* duration of the malady from the first hour of anatomical change can never—no more than in the instance of cancer, for example—be accurately made out; all we can hope to arrive at by the rejection of doubtful cases and the collection of a vast number of facts, is the mean duration of the disease after it has given symptomatic evidence of its existence—in other words, its average *apparent* duration. The latter is fortunately that which the practical observer has the closest interest in the establishment of.

In the former edition of his work M. Louis gave the duration of 114 cases; in the present he adds that of 193 more. We shall place together these two series of results:

Duration.	No. of Cases.	Duration.	No. of Cases.
22 days	1	39 days	2
24 "	2	40 "	1
30 "	1	45 "	1
35 "	2	50 "	2

Duration.	No. of Cases.	Duration.	No. of Cases.
52 days	1	13 months	2
60 "	1	13½ "	2
70 "	1	14 "	9
75 "	1	14½ "	2
80 "	1	15 to 19 months	10
81 "	1	17 to 18 "	7
84 "	1	19 months	5
3 months	7	20 "	4
3½ "	5	21 "	2
4 "	17	23 "	3
4½ "	2	24 "	18
5 "	19	28 "	1
5½ "	4	30 "	3
6 "	25	36 "	9
6½ "	2	39 "	1
7 "	16	48 "	11
7½ "	6	60 "	6
8 "	17	66 "	1
8½ "	1	72 "	4
9 "	20	84 "	1
9½ "	2	90 "	1
10 "	10	10 years	2
10½ "	1	12 "	1
11 "	10	14 "	1
12 "	13	20 "	1
12½ "	3		

Hence it follows that out of a mass of 307 patients, 4 died within the first month, 14 within two months, 26 within the first three months, 98 or about one third of the whole number, within the first six months; facts sufficiently demonstrative of the rapid progress of the disease in a large proportion of cases. In two years 264 of the total number are gone, leaving only 43 to drag on their weary existence. The author has not calculated the mean duration of the malady from his individual facts: we find it to be from seventeen to eighteen months, taking the entire mass of cases; but if the five cases in which the disease lasted ten years or upwards be omitted from the calculation, the average duration is reduced to from fourteen to fifteen months. It is to be observed that these are calculations of apparent duration, as established by means of symptoms—the real duration is possibly *materially* greater.

The series of cases given in the present edition furnishes a lower mean than that of its predecessor; seven years and a half is the longest duration noted in the former—all the instances of a protracted course of ten, twelve, fourteen and twenty years, are extracted from the first.

The mortality produced by phthisis, in the wards of M. Chomel, where the author's first collection of cases was taken, was really enormous, being in the proportion of one to two to the total amount of deaths.

And if to the number of persons actually dying from phthisis be added that of subjects who, perishing of other affections, had nevertheless tubercles or tuberculous cavities in the lungs (forty persons appeared in this category), we have a total mass of 163 tuberculous deaths (if the expression be admissible) out of 358 occurring in the wards of La Charité. There is too much reason to believe that the proportion would be found equally high among ourselves, had we some physician, possessing the devotion and the opportunities of M. Louis, ready to investigate the question on the same principles in the wards of our hospitals. It is obvious that the questions borne upon by such investigations are of a totally different character from those answered by the invaluable reports issued by the Registrar-general, and illustrated by Mr. Farr.

Hemoptysis.—The general history of the hemoptysis of phthisis is perfectly well known; two or three points regarding it, however, deserve particular notice. The common belief of the frequency with which hemoptysis proves the immediate cause of death in phthisis, would appear, from M. Louis's experience, to be an incorrect one; at least no such case had presented itself to him at the period his first edition was published, and out of three hundred phthisical persons since observed three only perished of hemoptysis. We cannot help believing that this proportion is somewhat below the ordinary standard: however, it being admitted that hemoptysis may prove the cause of death in some cases and may also be the first symptom of the disease, M. Louis infers that this discharge of blood might actually be at one and the same moment the *first* and *last* evidence of phthisis. We have never heard of a case of the kind actually occurring.

The author reiterates the statement made in his former edition as to the *almost* invariable dependence of hemoptysis, if at all considerable, upon tuberculization of the lungs, except in certain cases where the bleeding has followed external violence or suppression of the catamenia. Our own experience confirms the accuracy of M. Louis on this point, while it testifies to the error of Laennec, in regarding pulmonary apoplexy as the chief cause of abundant hemoptysis. Often are the anatomical characters of apoplexy of the lung obvious in the dead subject, when there has been no hemoptysis during life; in the epidemic yellow fever of Gibraltar the author ascertained that the pulmonary lesion in question was very common, while not a single individual had spit blood at the time.

The marked influence of sex on hemoptysis was exhibited in the former edition of this work; the statements there made, that of forty-two women carefully interrogated thirty-six had suffered from this symptom, while twenty-one only out of thirty-eight males had spit blood, does not, however, receive the corroboration of additional cases. It were much to be wished that the point had undergone investigation in this country, as we cannot divest ourselves of an impression that here, at least, the male sex suffers more frequently than M. Louis's figures would lead us to believe. It is curious, as mentioned by the author, and as general experience witnesses, that hemoptysis occurs with extreme rarity in phthisical *children*. The more special tendency of the malady to implicate the bronchial glands may in part account for the fact, but certainly not fully explain it; of nearly two hundred tuberculous children observed by M. Guesnard (Thése, p. 12), two only had had hemoptysis, little girls aged nine and eleven years.

M. Louis notes the infrequency with which, comparatively speaking, any immediate cause for the escape of blood can be ascertained; our own experience upon this point coincides with the author's. Nor is the actual anatomical mechanism (if we may be allowed the expression) of the hemoptysis more readily traceable, and if before the formation of cavities we are constrained to refer it to exhalation, so too even after the establishment of ulceration must we provisionally recognize them as its common source, so singularly rare is it to detect a ruptured vessel in the interior of the lung.

Diarrhœa.—Of 112 patients 5 only escaped diarrhœa. In the eighth part of the cases it set in with the main disease itself, and persisted till the fatal termination, lasting thus from five to twelve months. Some individuals, whose malady lasted four or five years, labored under almost continual diarrhœa during that long space of time; in the greater number of cases, diarrhœa did not supervene till the principal affection had reached the second half of its course, in some instances not till the closing days of life. The author then regards diarrhœa as belonging to the last period of existence, or as of protracted existence, and inquires into the anatomical conditions attending both varieties. Ulcerations of the small or large intestine, or both, with (in four fifths of the subjects) pulpy softening of the mucous membrane of the colon, were discovered in the first class of cases—all these lesions being evidently of recent origin, and the ulcerations small. Protracted diarrhœa was either continuous or remittent. The subjects affected with the latter form of the symptom, presented lesions not materially differing from those existing in patients whose diarrhœa commenced but a few days only before their death; hence the inference, that in the present class of cases, visible lesions were but a small measure of the cause of the diarrhœa—that these lesions have, too, only made their appearance within the last few days of existence, and that previously to their occurrence, altered secretion was the true source of the intestinal discharge. Lastly, when the diarrhœa had been protracted and continuous, and at the same time the stools numerous, vast and numerous ulcerations were discovered in the small and large intestine.

Pneumonia.—The statements originally made by M. Louis respecting the course and influence of pneumonia occurring in phthisical subjects, inconsistent as it has been maintained they are with general experience, are repeated with greater emphasis even in the present edition. When pneumonia makes its appearance in phthisical subjects who are still able to pursue their occupations, and whose strength and flesh have not yet diminished materially, the affection presents the ordinary series of symptoms characterizing it in previously healthy persons; but these symptoms are generally not severe, and the disease "almost always terminated by cure, even when there were tuberculous cavities at the apices of the lungs." That is, an affection of the lungs which, when those organs have, like the rest of the system, been previously perfectly sound, cuts off from one third to one seventh of those attacked, becomes almost harmless when they are partially destroyed by the worst form of malady prone to affect them. M. Louis adds: "as if the cavities and tubercles, real foreign bodies in respect of those organs, were the principal existing cause of the inflammation, and necessarily, *for this reason*, diminished its peril." This argument does not appear to us either very valid or very clear. The fact has, however, as we had occasion to observe in a recent volume (Brit. and For. Med. Rev., Vol. XIII., p. 382) been corroborated by the result of M. Grisolle's inquiries on the subject. Pneumonia, on the other hand, "occurring at the close of the disease is almost necessarily fatal;" again, a proposition not very lucidly expressed. When supervening at this advanced period, and when of limited extent, it was not usually announced by any symptom; when implicating a considerable mass of lung, the ordinary symptoms, at least very closely these, are developed.

The Catamenia, and Pregnancy.—One female only, of all those observed by M. Louis, continued to menstruate to the last month of life. The period at which suppression occurs is subject to variation; when the disease lasted less than a year, the menstrual discharge ceased to appear on an average at about the middle period of the affection; if from one to three years, the catamenia continued until the last third. When the disease run a rapid course, the cessation of the menses appeared to coincide with the establishment of fever; when the former was of slow type, the author failed in detecting any cause either retarding or accelerating the time of alteration in the catamenia.—Upon the alleged influence of pregnancy in arresting the progress of tuberculous disease, M. Louis is unable to speak with any confidence from his own experience. He points out, however, some easy sources of error in estimating such influence; it is quite possible, for instance, that many of the symptoms of phthisis may be more obscure during pregnancy than when the uterus is empty, although the disease were advancing as rapidly as ever. Nor is it impossible that the progress of the affection might be more rapid after delivery, than at an earlier period of its course. Again, the extraordinary variety which different cases of phthisis present in respect of their progress, points to the necessity of accumulating a vast number of cases, in which the pregnancy has *appeared* to have the alleged influence, before its *reality* be admitted.

Tubercular Meningitis.—We have had occasion more than once to draw the attention of the readers of this Journal to the anatomical and other characters of that peculiar form of meningitis of children, to which the names of granular and tuberculous have been applied by its describers, Drs. Rufz, Gerhard, and P. H. Green. These inquirers appear, however, to have limited their observations to the young subject, and the thesis of M. Lediberder, with the new section introduced into the present edition of M. Louis's volume, are the only sources from which acquaintance with the affection, as it appears in the adult, may be derived. The malady, occurring at various stages of the primary disease, commences with frontal, intense and continuous cephalalgia; the face at the same time becomes alternately pale and red; the intellect grows blunted; paralytic symptoms are rare at this period; vomiting almost constantly occurs at the very outset, and its association with cephalalgia is regarded by the author as of itself strongly indicative of the presence of tubercles in the meninges. The violent headache persists for from three to twelve days, accompanied with sharp cries from time to time; the face assumes an expression of astonishment, quickly followed by one of stupor. The pupils, contracted at first, become subsequently dilated. From the fourth to the sixth day delirium, commonly of a tranquil type, sometimes accompanied with agitation and increase of the general sensibility, appears. Somnolence, and eventually coma, are noticed in the intervals of freedom from delirium. When hemiplegia exists, it generally makes its appearance some days later than the cephalalgia; some considerable part of the face, or one of the eyelids only, may be paralyzed; and persistent contraction is witnessed instead of paralysis in certain cases.

Meanwhile the circulation and respiration undergo remarkable changes. The respiration becomes less frequent and less deep, dyspnœa diminishes or disappears, except during the closing days, when on the contrary it undergoes material increase, proportional in amount to the coexisting somnolence. Even in cases where the lungs are extensively excavated, the fever disappears during the earlier periods of the meningeal affections; but it returns with intensity towards the close; irregularity of the pulse is very rare. The temperature of the skin falls and rises with the alterations of the pulse.

The duration of the disease varies between eight and fifteen days; rarely is it longer or shorter than these periods.

Hereditary Influence.—The reality of hereditary influence in the production of phthisis is so universally admitted, that it would seem a sort of scientific heresy to doubt it. Yet it may be asked, how has it ever been *proved?* What demonstration has ever been given better than the often reiterated statement (the truth of which is indubitable) that persons often die phthisical whose mothers or fathers were so before them. But obviously, in the instance of a disease so common as phthisis, this affords no sort of demonstration. In order to ascertain the reality and the amount of the influence in question with surety, it would, as the author observes, be necessary to have "tables of mortality, by means of which an equal number of subjects, born of phthisical parents and of persons whose fathers and mothers were not tuberculous, might be compared together." A Parisian hospital physician, M. Briquet, has rather recently published some statistical results respecting phthisis, to which undue importance is very likely to be attached; one of these results appertains to the present matter, and we subjoin it:

Phthisical subjects.	Parents healthy or non-tuberculous.	Parents phthisical.	Parents' health unascertainable.
67 Males	37	24	6
32 Females	14	12	5

Hence it would follow that, taking both sexes together, about one third of phthisical subjects spring from parents similarly diseased. But "if the mortality from phthisis at the Necker Hospital (of which M. Briquet is physician) were during three years 11-37 of the whole, or a little less than one third, and if this ratio were general through the capital, it would signify that 11-37 of the population of Paris die phthisical, and that, consequently, whenever engaged in the study of hereditary influence in connection with any disease, we must expect to find tuberculous parents eleven out of every thirty-seven times; so that if the proportion were found the same in the parents of tuberculous subjects, it would follow that hereditary transmission is really without influence in the case of phthisis." It is to be observed that all these *ifs* are attached to propositions which are in all probability positively ascertainable.

Use of Stays.—The alleged influence of the use of stays on the development of phthisis is possibly a matter of mere assertion, according to the author. He might have gone further and affirmed it to be actually so. We know of no demonstration in any language on the subject, and are indeed unacquainted with any serious attempt to prove the reality of the baneful influence which it is the fashion to dwell upon. Many of the females submitted to the author's observation had, it is true, labored under difficulty of breathing for a long period before they became phthisical; but the number of men similarly affected was not less considerable. And besides the majority of the author's patients had been brought up in the country, and had not worn stays until their removal to Paris, at an age when they had ceased to grow; and when, consequently, the action of stays could have little or no influence on the dimensions of the thorax. The question in England is somewhat different, for with us stays are much more constantly worn at all periods of the day—the desire to produce smallness of waist is also, perhaps, stronger and more prevalent here than in France, in proportion as the width of pelvis is less among our women than the French; for it is not so much positively small measurement that is coveted, as smallness in comparison with the dimensions of the figure on the level of the hips. But it is obvious that until we have the opportunity of comparing two series of women in all other respects similar, except that the one shall use stays at an early period of life, employ them constantly, and keep them very tightly laced, and the other not use this artificial support, or use it but to a very limited extent, we shall continue without the means of deciding whether and to what amount the alleged influence be real or not.

INGUINAL HERNIA.

To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—Mrs. W. is a widow lady, 69 years of age. For the last thirty-eight years she has been afflicted, more or less, with "rupture in the groin;" but never, with one exception, has she required assistance in restoring the protruded viscera—having been able herself to accomplish the desired object, by taking the recumbent position and pressing gently upon the tumor. She has never worn a truss, with the exception of a few weeks, which was several years ago. Considering it a burden, it was laid aside, preferring occasional pain and the risk of strangulation to the inconvenience of "being hooped." She has a good constitution, and generally has enjoyed as firm health as most persons of her age; and has been accustomed to active exercise in the duties of a daughter's family.

On the evening of October 30th, I was called to visit her. My attention was directed to the right inguinal region as the seat of trouble; where a tumor full four inches in length was observed lying along the inguinal canal, accompanied by the usual symptoms of incarcerated hernia. I learned that patient had been afflicted for several days with a severe cold, attended with cough; and that the protrusion had taken place in the morning while engaged at the wash-tub, and soon followed with severe pain, nausea, vomiting and a dejection.

My first object was to reduce the rupture. To increase my chance of success, I relaxed the abdominal muscles as much as possible, by elevating the shoulders and hips with pillows, and by flexing the legs upon the thighs, and the thighs upon the pelvis, at the same time inclining them towards each other. I then made firm, but not violent pressure upon the tumor for nearly an hour, and renewed my efforts occasionally during the night, accompanied with cold applications and enemas, without the least success. Opium was administered for the purpose of quieting the stomach, and relieving pain, which had the desired effect.

On the morning of 31st I solicited and obtained the council and assistance of my friend, Dr. Robinson, of West Newbury. Our efforts were renewed at intervals till the evening of November 2d, when tobacco injections were resorted to, which produced the unpleasant symptoms of increased nausea, vomiting, cold sweats and prostration of strength, from which she was restored by stimulants—without relaxing the strictured parts in the slightest degree. Our patient was now reminded that the knife was our only remaining remedy, which, with her consent, we would be ready to take in hand early on the following morning, and divide the stricture—the cause of her difficulty—and give her the only chance for life. Compliance was readily granted. Accordingly, on the morning of the 3d, ninety-six hours from the commencement of strangulation, we met our patient for the purpose of fulfilling our engagement. Pulse eighty beats in a minute; tongue covered with white coating; abdomen tender; tumor swollen.

Every necessary preparation having been made, our patient was removed to the edge of the bed, and extended at full length, her right side corresponding to my right, as I stood facing her. I then embraced the tumor with my left hand, and with my right made an incision from the upper, central part downwards to its base. On dividing the integuments, a branch of the external pudic was cut, but did not require the ligature.

The superficial fascia was next raised and divided by successive touches of the knife, till the cremaster muscle was brought fully into view—the fibres of which were carefully raised, and separated sufficiently to admit the grooved director; into which the bistoury was passed, and carried upwards and downwards till the whole were cut and the sac exposed, livid in appearance and softened in texture. A portion of this was carefully pinched up and rubbed between the thumb and finger, previously to its division, in order to escape the danger of wounding the intestine, and then was divided in the same cautious manner, as was the cremaster. As soon as the sac was opened, a small quantity of fluid escaped, and the intestine appeared at the opening, corresponding very nearly in color with the sac, and filled with hardened fæces. Slight membranous adhesions had taken place between the sac and intestine, which were broken up with the finger. The stricture was next searched for, and found at the internal ring, around which adhesions had also formed, and required separation. The constriction was so firm as to forbid the entrance of the point of the finger as a guide to the bistoury. The director was therefore used, into the groove of which the probe-pointed bistoury was carried, and the stricture divided directly upwards. As soon as this was accomplished, but gentle efforts were required to restore the protruded viscera to the abdomen. The sac was left lying in the canal. The edges of the incision were then brought together and secured by adhesive straps, having occupied about thirty minutes in the operation. Our patient was then replaced in bed, inclining slightly to the right. Quietness and the recumbent position were strictly enjoined. A dose of castor oil was given in four hours, which operated kindly the same evening; after which, one grain of opium was administered to procure rest.

4th.—Has passed a tolerably comfortable night; pulse 72; desires food. From this time patient continued convalescent till 8th, when an offensive discharge took place from the wound. Adhesive straps critically examined, and found to have loosened. They were immediately removed, and the whole incision exposed to view. About three fifths of wound, from lower part upwards, had united, as was desirable, by first intention. The remaining two fifths had opened, and the canal completely filled with omentum, the surface of which had mortified, and sloughing commenced. I learned that patient had several times raised herself upon her elbow, and once had been upright in bed. A careful examination was now made to ascertain the precise state of the ring, and the mouth of the sac, in connection with the omentum, in order to determine the proper course to be pursued in relation to the return of the omentum into the abdomen, after removing the mortified surface. These I found completely glued or adhered together. I resolved, therefore, to let them remain unbroken, and remove the mesentery with the scissors. This was accordingly done, on several successive mornings, as it was pushed forward to the surface of the wound, until the whole was removed, together with the sac. An offensive discharge was kept up for nearly two weeks, when it was changed to healthy pus. Granulations now shot up from the bottom and around the upper part of the incision, and the whole wound put on a healthy appearance. From the discovery of the descent of the omentum till the cessation of the offensive sloughing, patient did not convalesce, and it was found necessary to support her strength with wine, opium and nourishing diet. After this, however, the pulse came down to the natural standard; tongue cleaned; appetite and strength improved; granulations put forward rapidly; canal became obliterated; and December 21st the wound had healed, and the patient was dismissed well. At this date she takes food with the family, and does some work.

I have been induced to send you an account of this case, in consequence of the following interesting particulars.

1st. The advanced age of the patient.

2d. The length of time that had expired from the commencement of strangulation to the operation.

3d. The adhesions that had formed between the sac and intestine, and around the ring.

4th. The livid and softened state of the sac, and discolored intestine.

5th. The descent of omentum subsequent to the operation, its becoming mortified, and its removal, together with the sac.

6th. The obliteration of the canal, obviating the necessity of hereafter wearing a truss. Yours truly,

West Amesbury, Dec. 30, 1843. Benj. Atkinson.

THE PROPRIETY OF SUPERADDING INOCULATION WITH SMALL-POX MATTER TO VACCINATION, SUGGESTED.

To the Editor of the Boston Medical and Surgical Journal.

Sir,—The value of the discovery of the prophylactic power of the vaccine matter surpasses the value of every other discovery, just in proportion as the possession of life surpasses the value of every other earthly possession. And although the vaccine disease is not a universal protection against the smallpox, we have the completest evidence of its being a general one. In a contest with such a direful enemy, it is no wonder that the vaccine disease should sometimes get worsted. It is the battle of a dwarf with a giant. In proposing the addition of the prophylactic power of the variolous to the vaccine matter, I do not mean to imply the least want of confidence in the general efficacy of the vaccine disease. The five hundred clear unbroken complexions which we meet with in all our cities, where we meet with one pitted and broken, furnishes a demonstration of the general protective power of the vaccine disease. I believe, furthermore, that it has all the vicarious power, at the present day, which it ever had. For it is just as easy to believe that the vaccine disease has increased in its power of preventing the susception of the smallpox, as that it has decreased. Indeed, analogy would rather favor the supposition that the vaccine disease may have increased in its prophylactic power, since it is the nature of all contagious diseases to increase in violence the longer they prevail. But the increasing prevalence of the varioloid or modified smallpox, is supposed to favor the idea that the vaccine disease has become milder or less inimical to the susception of the smallpox. This supposition I shall not examine in detail, but give it a general denial as a matter of my own belief.

The descriptions of the vaccine disease by Dr. Jenner, and others, express in every particular the vaccine disease of the present day. The vaccine pit, its beginning, progress, and final completion in a mahogany-colored scab, and the febrile symptoms which sometimes accompany it, are precisely the same now as they were described to be in the origin of the discovery. The measles and chickenpox of the present day do not answer better to the descriptions of them by Cullen, than the vaccine disease of the present day answers to the history of it by the early vaccinators. It is a fact, however, undeniable, I believe, that a modified species of the smallpox, now called varioloid, is vastly more prevalent at the present day than it was from the time of the discovery of vaccination to the year 1815, when cases of it were first publicly noticed in Paris.

All well-grounded improvements in medicine are received scarcely less by physicians than by the multitude, with the most implicit confidence; self-interest combines with the love of reputation in begetting the most extraordinary reliance in the efficacy of new remedies. All exceptions and failures, in the beginning of medical improvements, are either not admitted, or explained away by certain disturbing causes. Our ancestors were probably no wiser than we are in the eagerness with which they received new truths. Time alone gives us the full length and breadth of all medical discoveries. When the varioloid first began to be noticed in this country, medical men manifested no disposition to admit the failure of vaccination; but either did not admit the fact of previous vaccination, or explained the failure away by disturbing causes. The fact, however, has at length become undeniable that the vaccine disease is not an invariable protection against the smallpox. But why was not the varioloid more publicly known in the early days of vaccination?

For many years after the discovery of vaccination, the people of England, and everywhere else, were governed by their old fears and customs regarding the smallpox; they still kept up their old conservative measures and regulations against the aggression of this direful disease; thousands would not submit to vaccination at all, which made it the more necessary for public authorities everywhere to pursue the old system of seclusion and non-intercourse in all incipient cases of smallpox. For the first twenty years after the discovery of vaccination, the wars in Europe engrossed the attention of the civilized world, to the exclusion of all other subjects; and the strictest non-intercourse among all the great nations was not only enjoined, but, to an unheard-of degree, practised. In the armies vaccination was so rigidly enjoined, and all cases of the smallpox so watchfully guarded from extending, that no latitude was allowed for the varioloid to develope itself. In many cases, in the armies as well as in hospitals and poorhouses, inoculation with variolous matter was superadded to vaccination. It is not a little singular that in the very year of the advent of peace to Europe, the first cases of the failure of vaccination, or of the varioloid, should have been noticed, and publicly reported; as if philosophic observation had just awaked from a long slumber. In the progress of time, old fears and customs respecting the smallpox gradually gave way, and so "let slip the dog of war" to run mad among the nations. The varioloid has developed itself precisely in proportion as prevention against the extension of smallpox has relaxed, and opportunities of communicating it have multiplied.

Vaccination has shown itself to be a mighty barrier to the smallpox, but not impregnable. Never, until the present time, has it had an opportunity of showing its full strength; all municipal preventive rules respecting smallpox are now nearly repealed; the population of Europe has doubled since its discovery, and that of the United States more than quadrupled; the intercourse of cities, States and nations increased a hundred fold; and the courage or temerity of men in a similar ratio. In this state of things, the varioloid has developed itself, while vaccination has evidently lost none of its prophylactic power.

The vaccine disease, compared with the smallpox, is a local disease; it discovers no tendency to diffuse itself; the agency of the vaccine matter confines itself to the point where it is inserted; and with me it is doubtful whether it ever produces a secondary pit, unless the matter is carried to some new point by scratching with the hand or in some other way. This characteristic of the disease has led me to conjecture whether it would not be better to distribute a number of pocks over the surface of the body. One pock upon the arm, another upon the chest, and a third upon the calf of the leg, might, by more equally distributing the effects of the disease over the body, have a greater tendency to repel the virus of the smallpox. I have often made three pocks upon one arm without perceiving any untoward effects to arise; and sometimes I have made four pocks, two on each arm, with the same impunity. I have never understood the philosophy of confining vaccination to a single point upon the arm. Even six vaccine pocks, one on each arm, one on each side of the chest, and one on each leg, would not, probably, in grown people, produce much constitutional disturbance. The vaccine matter, however, if diffused over the whole skin would, I think, produce a more severe disease than an ordinary case of smallpox. Cover the skin with as many pocks as ordinarily occur in a case of distinct smallpox, and, I presume, it would raise as high a fever and be as likely to prove fatal.

In the early days of vaccination, the operation was an important and serious business; it was to protect people from a pestilence that had often caused them to tremble and quake and to flee to the mountains for protection: but now-a-days it is considered of no more consequence than the extraction of a tooth, and procures no more conpensation. Everybody vaccinates, without the least reference to the age of the matter; whether it is colorless or opaque, whether it is derived from a spurious purulent pock or a true one; or whether the system is in a suitable condition to receive the disease—all circumstances of the highest importance.

It is a general law of the system, that two diseases cannot exist or prevail at the same time. With respect to febrile diseases, the operation of this law is very observable. The same structure or tissue of the system, I believe, is very rarely affected with two distinct diseases at a time. The skin is not subject to two distinct kinds of eruptions at the same time. Vaccination, therefore, in case of any pre-existing disease of the system, such as the red gum, teething, hooping cough, or any eruption of the skin, would be likely to prove abortive. When the skin is pre-occupied with a humor, be its nature what it may, it must necessarily endanger the proper course of the vaccine disease. Fears are often entertained of the transfusion of various cutaneous diseases by vaccination; but these are for the most part groundless. With the exception of the itch and the venereal, there are no cutaneous diseases capable of being transferred from one person to another. The danger of taking the vaccine matter from one whose skin is diseased, arises from the deterioration of the matter by a pre-existing disease.

But after vaccination has been performed in the best possible manner, and the vaccine disease insured, by a skilful physician, it becomes a question whether we ought not to superadd inoculation with the smallpox virus. In the absence of all sanitary rules and laws, the contagion of smallpox must have full play; the means of social intercourse are multiplying every day; the extremes of society are mixed together in an unprecedented degree, in heated cars, musty steamboats, and unventilated boarding houses; everybody shakes hands with everybody, eats with everybody, and sleeps with everybody. Why not anticipate the contagion by general inoculation? The varioloid produced by inoculation with the smallpox matter, must be as much milder than the varioloid taken in the natural way, as the smallpox produced by inoculation is milder than the same disease taken in the natural way. The danger, therefore, of superadding inoculation with smallpox matter to vaccination, must be exceedingly small, whereas the danger of having it in the natural way is hazardous. I have known many cases of adding inoculation with variolous matter to vaccination, without producing any other disease than a spurious or varioloid pock. In one case of confluent smallpox, in the person of a boy, the father, and aunt who nursed him, were both inoculated with matter taken from the boy, but it produced in both only a single varioloid pock where the matter was inserted; whereas a family of seven persons, who lived in the chambers of the same house, all had a slight attack of the varioloid. Whether in this case the inoculation with variolous matter had any power in preventing the smallpox, I am unable to say; but it is a little singular that both of them, who were much more exposed than the others, should have escaped, and all the others take the disease, although they had all been thoroughly vaccinated some years before. In the early days of vaccination, inoculation with variolous matter was superadded in thousands of cases, to test the validity of the vaccine disease; why not renew the practice? In one case in three hundred, it might excite a mild disease; but in the great mass of cases it would only excite a single spurious or varioloid pock where the matter was inserted. D. B. Slack.

Providence, R. I., Jan. 1, 1844.

GONORRHŒA DORMIENTIUM.

To the Editor of the Boston Medical and Surgical Journal.

Dear Sir,—I know not when I have been more pleased with a communication, than I was with the one contained in Vol. XXVII., page 11, of your Journal, by Charles Knowlton. It is after reviewing said article, that I have thought proper to communicate to you the following case, together with the accompanying reflections ; the whole of which is most respectfully submitted for you to decide, whether they are worthy of a place in your valuable repository. It cannot be expected of an individual who barely takes his pen in hand once a quarter to write for publication, that he can give an article the fine polish of one who makes writing his business ; therefore you must take it for granted that all which comes from my pen will be, in a tasteful point of view, like the stones which the Jews were commanded to build their temple of, unhewn and unpolished.

The reason why physicians have been under the necessity of declaring their unsuccessfulness in curing the above-named disease is, in my opinion, because they have conducted their practice upon an erroneous or false theory. Instead of its being a disease, as heretofore generally supposed, owing to, or originating in, a debilitated state of the genital organs, or system entire, it is, probably, caused by an irritable state of the nervous system ; which increased excitement of the nerves is produced or brought about by the perusal of obscene books. I do not say that this disease is always contracted by the reading of books of an obscene character, but I verily believe that of all the known causes, this is the most prolific. Many young people get it into their heads, by the reading of these health-destroying productions, that nothing save sexual intercourse renders this life desirable. On this point a chapter might be written, showing that these books—these Upases of corruption—account in a great measure for so many premature and unprofitable marriages. Many, whose circumstances will not admit of their marrying, and whose venereal appetite is whetted to fury by the vivid coloring of these books, resort, for the gratifying of their feelings, to masturbation ; which manual operation is nearly always, if practised to a great extent, either sooner or later sure to entail a gonorrhœa upon its victim. I do not know that I am right, but I verily believe that a person never had a *seminal emission* during sleep, but what it was the effect of some libidinous dream, which is only an imperfect exercise of the memory, or intermediate state between vigilance and sleep. The tendency to libidinous dreaming will be in exact proportion to the degree of irritability which exists in the nervous system ; and as the desire to gratify the venereal appetite reigns predominant over all others in this class of unfortunate individuals, the object of his lusts during the day is sure to present herself, in a "non-resistant mood," during his dreams by night. The effect which the mind exerts over the physical functions is incalculable ; and in order to enjoy a good state of health, and exhibit a robustness of constitution, there must exist an equal degree of soundness in action in the mental and physical functions. Hence we have a direct clue to one of the causes why the brute creation are endowed with, or enjoy, a more equal degree of health than the human species. Their propensities are more equal and less diversified than ours; and the procreative faculties being exercised at more stated periods, and less often, they acquire a greater strength of catenation, and their cerebral organs, which are the grand seat of the nervous system, are permitted to rest more quietly. This continual desire or teasing to satisfy the venereal appetite in those who practise onanism, accelerates the circulation of the blood, and excites the nervous system; and unless this undue excitement is done away, by producing an abatement in the degree of thinking, by marriage or otherwise, it will produce indirect debility; which debility will, there is no doubt, greatly augment the seminal discharges.

But now to the describing of the case I made mention of in the commencement. The patient was a young man, somewhere near the age of 22, of a nervous temperament. Three years since, he applied to a physician for advice. He complained of general debility, pain in the joints, indigestion, headache, &c. His physician, supposing his difficulties to have their origin in an unhealthy state of the stomach and liver, prescribed accordingly; but with no benefit. A number of physicians were called upon in turn to prescribe for his difficulties, but each, being ignorant of the nature of his complaints (for he informed them not as to the true character of his disease), did him no good. Something near two years ago, supposing his disease to be *gonorrhœa dormientium*, I purchased and presented him with *Deslandes's Treatise on Onanism.* He read it, and acknowledged to me that gonorrhœa, as he understood it from the book, was his complaint, and that in masturbation it had its origin; which practice he said he contracted from the reading of obscene books when young. At this time he was what might be termed a living skeleton. His skin was completely paved with furfuraceous scales, and so irritable were his genital organs that he could have nothing pass his bowels without having seminal emissions. Instead of telling him, as I fear physicians are too prone to do, that his case was deplorable or hopeless, I strove to quell the undue excitement of the nervous system, by saying to him that I thought we should be able to restore the secretions in general to their normal condition, to calm the irritable state of the nerves, and that in a short time he would regain his health. To produce the desired effect he was ordered tinctura guaiaci, ammoniati, carb. of iron, tinct. lytta, balsam copaiva, &c., and before one fortnight had passed he told me that he felt like a new being. The scales no longer collected on the surface, and the emissions began to occur less frequently. He was no longer obliged to live on nothing, comparatively speaking, on account of his food distressing him, as it had done heretofore. He now weighs 160 pounds, I should think, and is free from any of his former difficulties. He says, had it not been for Deslandes's Treatise on Onanism, he should ere this have been in his grave.

Physicians have labored assiduously to cure this complaint by injections, mistaking the disease for the symptoms. If they should search out the *causa proxima*, or remote cause, and prescribe for the same, there would be less use for injections, and our journals would not long be filled with them from A, B, and C, claiming them as specifics. What should we think of a physician, who on being called to a case of dysentery, should, in order to restrain the discharges from the bowels, give a dose of catechu, instead of endeavoring to correct the primary cause? Why we should call him (or I should myself, at least) an ignoramus, or vain pretender, as it respects his knowledge of the true nature of the case. Therefore it is in vain to suppose that we can cure nocturnal emissions by injections, without any other recuperative means. I do not mean to be understood as saying that injections are never useful, for such is not the opinion that I entertain of them. In *gonorrhœa impura*, in which there is a purulent discharge, I believe them to be, as a secondary means, of essential service, if composed of the right materials, by their mechanical operation; that is, by ridding the parts of the viscid, tenacious and acrimonious matter, which no doubt has a tendency to prolong the cure; but I do give it as my opinion (and only such) that in *gonorrhœa dormientium* they are entirely inadmissible. LEVI ALDRICH.

Reading, Vt., Dec. 30, 1843.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON, JANUARY 17, 1844.

The Surgeon-General's Report.—Those who are interested in the medical statistics of this country—and what friend of science is not—will derive much satisfaction from the series of reports to the Secretary of War, by Thomas Lawson, M.D., Surgeon-General of the U. S. Army. The report of 1843, which was rendered in on the last of October, has just made its appearance, in connection, it is presumed, with that of the Secretary, to whom it was addressed, and therefore but recently laid before Congress. We feel that it will be an act of justice to extract some of the more essential parts of the report, in an unbroken chain; and this we can the better do, on account of the brevity of the document, which is in itself a recommendation not to be overlooked.

There has been paid at the treasury, and by disbursing agents, for medical and hospital supplies, meteorological instruments, books, furniture, &c. $18,521 22.

"The medical supplies for the army have been furnished to all the military posts, by the medical purveyor at New York, with the utmost regularity and promptitude; and the articles provided have been of the best quality, and, withal, were purchased at the lowest possible cost. During the last four or five years, the average cost of the medical supplies has been about $2 60 per man per year; for the lost twelve months, $2 22 per man. Below this amount we cannot go, without abridging the sick of some of the necessary comforts; but, with this sum, we have heretofore provided all the essential articles of medical stores, and we can continue to furnish every comfort and convenience which the officer or the enlisted soldier can reasonably expect or rightfully claim of the government.

"The number of cases of indisposition which have been under treatment in the army, during the last twelve months, was 27,734; 26,820 of which occurred within the past year; 914 being cases that remained of the preceding year. Of the whole number of sick, 26,513 have been restored to duty, 309 have been discharged the service, 18 have deserted, and 160 have died; leaving, on the 30th September, 726 still on the sick report.

"The mean strength of the army for the last 12 months has been about 9,863; and as the number of sick, during the same period, was 27,734, and the aggregate of deaths was 160, it will appear that the proportion of cases of indisposition to the number of men in service, was as 2.81 to 1, or 281 per cent.; the ratio of deaths to the number of men, as 1 to 61 5-8, or a fraction less than 1⅝ per cent.; and the proportion of deaths to the number of cases treated, as 1 to 173 7-100 or 57-100 per cent.

"A medical board for the examination of assistant surgeons for promotion, and of applicants for appointment to the medical staff of the army, was convened in the city of New York on the 1st of July last. Before this board one assistant surgeon presented himself for examination; and, having been found qualified, he was recommended for promotion.

"From among the applicants for appointment, twenty-four were invited to the examination, fourteen of whom only reported to the board; ten having declined, or failed to present themselves for examination. Of those who reported to the board, three afterwards withdrew without an examination; one was objected to, on account of physical disqualifications; and ten were examined; and of these last, four were approved and recommended for appointment.

"In conformity with the will of Congress, expressed and implied, an additional number of barometers have been purchased and placed at the prominent positions in our country; and the medical officers have been required to give all the attention to meteorology practicable, compatible with their duty to the sick, and other higher obligations to the Government; so that, in addition to the thermometrical and other meteorological observations which have been heretofore received from the different military posts, we shall be able to report barometrical observations also, from most of the important stations in the United States.

"I deem it to be my duty to call the attention of the Department of War and of Congress to the fact, that, at many of the forts on the seaboard, no proper buildings have been erected for the accommodation of the sick of the garrison.

"As a general rule, in the absence of all accommodations outside of the walls, some of the casemates of the fort are allotted to the purposes of a hospital; where, in addition to the want of privacy, and deficiency of ventilation and of light, the sick are constantly annoyed by the trampling of the other men, and the clanguor of their arms within the area of the fort, and frequently shocked by the thunder of the cannon, and the rattling of the battlements over their heads."

That part of the report which relates to Professor Espy's operations, is of sufficient consequence to have a page exclusively devoted to its consideration.

It is apparent, from an examination of Surgeon-general Lawson's annual reports, that he is an indefatigable officer, who is not only exceedingly accurate and efficient himself, but requires that all who are associated with him in the administration of medical services, of whatever name or nature, be equally so.—Among the diseases producing sickness in the army, we perceive that there was no case of variola during the year, and only 3 cases of varioloid. The one which numbers highest is catarrhus, the cases being 3,795, with 3 deaths. Phthisis numbers 31, with, of course, great fatality, the deaths being 26. Diarrhœa, 2,291 cases, and 9 deaths. Typhus fever, 11, with 2 deaths; febris typhus icterodes, 55, with 12 deaths. Remittent fever, 530, 23 deaths. Continued fever, 69, 1 death. Intermittent fever, quotidian, 2,747, 2 deaths; tertian, 2,445, no deaths; quartan, 29, 1 death. Influenza, 1,348, none fatal.

Exhibition of White Negroes.—Two white boys, born of negro parents, referred to in last week's Journal, and now on exhibition at Mr. Kimball's Museum, in this city, are extraordinary curiosities. There is not an instance on medical record, of the birth of a black child from a white parentage, but many of an opposite character. To the philosopher, such anomalies are problems of the highest interest, and all persons, of ordinary curiosity, should avail themselves of an opportunity for seeing a sight—the like of which does not occur oftener, perhaps, than once in several millions of births.

Charles Manner, ten years of age, and his brother Peter, about eight, were born at Eatonton, N. J. The father, Joseph Manner, born in 1804, is a negro; and the mother, ten years younger, is a negress. Their first child, stillborn, was black, but the second, Charles, above named, is almost milk white. The third child was colored, and the fourth, Peter, also named above, is perfectly white. To all intents and purposes, in organization, features, and expression, they are negroes, even to the woolly, crisped hair, but which is as white as fleece wool. Their eyes are tremulous in a strong light, though the pupil is not exactly of a pink hue. Both, too, are near-sighted. The father says he long since discovered that his own color becomes very much darker in summer than in winter. His wife, he avers, is subject to the same periodical variation of color.

Such are the facts we have collected in regard to these admirable specimens of the well-marked albino, which has been the subject of profound researches in the schools of physiology, in all ages of the world. Medical gentlemen should visit them—as they may never be favored with another opportunity of testing, to a like extent, the correctness of the assertions, the descriptions, or the theories, of those who have written largely and learnedly on the color of the different races of men, and the causes which tend to change it.

Castleton Medical College.—In the Journal, a fortnight since, it was announced that Dr. James McClintock had resigned the chair of Anatomy and Surgery in the Castleton Medical College. This announcement was made on the authority of a letter, which we certainly had no reason to doubt was authentic. The day following—but not till it was too late to alter the paragraph—information was received, from an official source, that Dr. McClintock had been *removed*. Lying before us is the Rutland Herald, of January 4th, 1844—in which this last information is corroborated by the following notice :—" At a meeting of the Corporation of Castleton Medical College, December 30th, 1843, Dr. Samuel Parkman, of Boston, was appointed to the chair of Anatomy, and Dr. Richard S. Kissam, of New York, to that of Surgery, in place of Dr. James McClintock, removed." Some curiosity is manifested to know the cause of this sudden ejectment of a man who has been an active and prominent member of the Faculty at Castleton. When we are informed, from a responsible source, the medical public shall be gratified.—The advertisement of the lectures will be found on our outside.

Medical Society of the District of Columbia.—At a meeting of the Society held January 3d, the following physicians were elected officers for the present year :—Dr. F. May, *President.* Dr. A. McWilliams, Dr. Thomas Sewall, *Vice Presidents.* Dr. Thomas Miller, *Corresponding Secretary.* Dr. Joseph Borrows, *Recording Secretary.* Dr. James C. Hall, *Treasurer.* Dr F. Howard, *Librarian.* Drs. H. Lindsly, N. Young, J. M. Thomas, J. F. May and W. P. Johnston, *Board of Examiners.*

To Correspondents.—The communications of Drs. Wilson, Nye, and Brown, are on file for publication.

Married.—At Gloucester, Dr. Joseph S. Barber to Miss Betsey Tucker.—In Leominster, Ms., Dr. Charles W. Wilder to Mrs. Laura S. Kendall, both of Leominster.—At Lennoxville, Canada, M. R. Manchester, M.D., to Miss Eliza Susanna Haskell, of Sherbrooke.—In Brookfield, Vt., S. H. Smith, M.D., to Miss Mary D. Allis, both of Brookfield.—At Arundel Co., Md., Dr. Julius Hall to Miss J. C. Kent.—At Walnut Hill, O., Dr. Henry C. Callihan, of Missouri, to Miss S. H. Metcalfe.

Died,—In New London, Ct., Dr. Elisha North.—At Liberty, Miss., Dr. Woodson J. Moss, an eminent physician.—In Baltimore, Dr. Granville S. Townsend, in his fiftieth year.

Number of deaths in Boston, for the week ending Jan, 13, 40.—Males, 16—Females, 24. Stillborn, 3. Of consumption, 5—measles, 6—inflammation of the lungs, 1—scarlet fever, 1—infantile, 4—epilepsy, 2—croup, 2—teething, 1—disease of the heart, 1—dropsy on the brain, 3—influenza, 1—inflammation of the bowels, 2—lung fever, 3—hooping cough, 1—old age, 1—marasmus, 1—cancer, 1—ulcers, 1—stoppage in the bowels, 1—erysipelas, 1—unknown, 1.

Under 5 years, 23—between 5 and 20 years, 2—between 20 and 60 years, 11—over 60 years, 4.

REGISTER OF THE WEATHER,

Kept at the State Lunatic Hospital, Worcester, Mass. Lat.* 42° 15′ 49″. *Elevation* 483 *ft.

Dec.	Therm.		Barometer.		Wind.	Dec.	Therm.		Barometer.		Wind.
1	from 18	to 37	from 29.55	to 29.73	W	17	from 23	to 27	from 29.40	to 29.44	N E
2	25	32	29.33	29.34	N W	18	22	26	29.51	29.52	N E
3	12	38	29.50	29.53	W	19	17	28	29.60	29.63	N W
4	22	41	29.38	29.51	S W	20	28	38	29.45	29.49	W
5	31	36	29.22	29.70	N W	21	30	41	29.61	29.62	W
6	12	30	29.68	29.69	S W	22	34	40	29.32	29.42	S W
7	26	30	28.99	29.42	N E	23	30	33	29.45	29.51	N E
8	25	42	29.20	29.24	W	24	26	39	29.39	29.40	N E
9	27	32	29.05	29.10	S W	25	32	46	29.40	29.49	N W
10	27	33	29.22	29.48	N W	26	33	36	29.64	29.67	N W
11	27	36	29.10	29.27	S W	27	31	32	29.25	29.32	N E
12	24	33	29.19	29.27	N W	28	27	40	29.19	29.29	N E
13	4	15	29.79	29.97	N W	29	28	32	29.00	29.01	N W
14	12	35	29.83	29.91	S W	30	14	21	28.88	28.89	N W
15	31	45	29.79	29.81	S W	31	21	30	28.99	29.13	N W
16	33	34	29.66	29.83	N E						

The month of December has been a good New England winter month, cold but not extreme, good sleighing, affording every desirable facility for business. The range of the Thermometer has been from 4 to 46. Barometer, from 28.88 to 29.97. Snow fallen, 23 inches. Rain, 2.28 inches.

GENERAL TABLE OF THE WEATHER FOR 1843,

At the State Lunatic Hospital, Worcester.

	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	In.	
Greatest height of Barometer	30.12	29.90	29.78	29.71	29.73	29.73	29.81	29.84	29.87	29.70	29.88	29.97	
Least " "	28.49	28.40	28.36	28.80	29.05	29.00	29.19	29 21	29.18	28.72	28.92	28.88	
Mean " "	29.305	29.15	29.07	29.255	29.415	29.365	29.50	29.525	29.525	29.31	29.40	29.425	
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	
Mean height of the Thermometer at sunrise	27.67	15.00	21.10	39.37	47.29	56.83	57.74	63.29	55.50	43.00	30.80	24.55	February 10 and 17, coldest days. Thermometer, Friday 10th, 7 below, Friday 17th, 8 below, before sunrise.
" " " at 2, P. M.	36.67	23.50	31.38	50.76	64.41	70.23	76.96	74.77	69.85	53.00	40.30	34.00	
" " " at sunset	34.48	22.35	28.29	47.56	58.06	68.30	72.00	72.38	66.66	52.62	38.00	31.00	July 1, 2 and 12, three warmest days : 88°, 89°, 89°, at 2 o'clock.
Mean between the greatest and least	24.50	17.00	27.00	44.50	60.00	62.00	70.00	70.00	61.50	51.00	41.50	25.00	
Fair	19	20	23	19	26	21	26	20	21	18	19	14	Fair days, 246.
Cloudy	12	8	8	11	5	9	5	11	9	13	11	17	Cloudy days, 119.
Rain	4	2	1	10	8	11	10	13	6	13	8	3	Rain on days, 89.
Snow	4	10	10	5	0	0	0	0	0	0	7	9	Snow fell on days, 45.
Halo	0	2	0	1	1	0	1	0	0	0	0	0	5
Aurora	0	0	3	0	0	0	2	0	1	1	0	0	7
Inches of Rain	5.05	4.45	5.23	3.13	1.75	4.15	3.39	9.19	1.25	5.19	3.63	2.28	48.67
" Snow	2	30	26	10	0	0	0	0	0	0	23		91
N. Wind	8	5	1	3	6	1	0	0	2	0	0	0	26
N. W.	10	3	11	9	5	6	4	7	4	11	10	10	90
W.	2	5	10	2	2	3	6	1	3	0	6	6	46
S. W.	7	8	0	4	4	10	8	11	7	9	4	7	79
S.	0	2	1	0	5	4	0	0	0	0	0	0	12
S. E.	0	0	1	3	1	1	2	0	4	3	2	0	17
E.	0	0	0	0	0	1	0	0	0	0	0	0	1
N. E.	0	0	0	7	2	1	1	7	9	5	4	7	43